

## ROBERT SCHEICHL

University of Heidelberg  
Institute for Applied Mathematics  
Im Neuenheimer Feld 205  
69120 Heidelberg, Germany

DoB: 6th February 1972  
+49 - 6221 - 5414110  
[R.Scheichl@uni-heidelberg.de](mailto:R.Scheichl@uni-heidelberg.de)  
<https://katana.iwr.uni-heidelberg.de/>

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### EDUCATION

*Ph.D. in Mathematics*, University of Bath, UK December 2000  
*Dipl.-Ing. Technische Mathematik* J. K. Universität Linz, Austria October 1997

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### PROFESSIONAL EXPERIENCE

*Professor of Numerical Analysis*, University of Heidelberg, Germany since 2018  
*Chairman of the Graduate School HGS MathComp*, University of Heidelberg, Germany since 2021  
*Professor of Scientific Computing*, University of Bath, UK (20% since 2018) since 2011  
*Deputy Head of Department*, University of Bath, UK 2016–2018  
*Lecturer & Senior Lecturer in Applied Mathematics*, University of Bath, UK 2002–2011  
*Marie-Curie Postdoctoral Fellow*, Institut Français du Pétrole, Paris 2001–2002  
as well as visiting positions at *Isaac Newton Institute*, Cambridge, UK (2003, 2012, 2018); *University of Stuttgart* (2007); *Johann Radon Institute*, Linz, Austria (2007, 2011); *University of New South Wales*, Australia (2007, 2009, 2015); *Lawrence Livermore National Laboratory*, USA (2009)

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### ACADEMIC PRIZES & DISTINCTIONS

*SIGEST Prize* (Best Paper in *SIAM/ASA J. Uncertainty Quant.*, Vol. 3-6), SIAM 2019  
*Distinguished Romberg Guest Professorship*, University of Heidelberg 2014–2017  
*SIAM Student Paper Prize*, Society of Industrial and Applied Mathematics 2000

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### OTHER ACADEMIC ROLES & POSITIONS OF ESTEEM (AMONG OTHERS)

Associate Editor for *Mathematics of Computation (AMS)* since 2021  
Associate Editor for *SIAM J. Numerical Analysis* since 2019  
Associate Editor for *ESAIM: Mathematical Modelling and Numerical Analysis* since 2018  
Associate Editor for *SIAM J. Scientific Computing* 2016–2021  
Associate Editor for *SIAM/ASA J. Uncertainty Quantification* 2015–2017  
Scientific Advisory Board Member, *Fondation Sciences Mathématiques de Paris* 2020–2022  
Scientific Advisory Board Member, *Weierstrass Institute (WIAS)*, Berlin since 2016  
Member of the *EMS Committee of Applications and Interdisciplinary Relations (CAIR)* since 2021  
Member of the *SIAM Membership Committee* 2014–2019  
Member of the Organising Committee *SIAM Conf. Comput. Science & Engineering* 2019  
Chair of *RICAM Special Semester*, Johann Radon Institute (ÖAW), Linz, Austria 2011  
Review Panels for Austrian FWF (2016, 2020), German DFG (2018), Academy of Finland (2021)  
External PhD Examiner at numerous occasions (incl. Oxford, Heidelberg, Leipzig, Heriott-Watt, EPFL Lausanne, Bergen, Uppsala, Münster, Imperial College, TU München)

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### PUBLICATION RECORD

**69 journal papers** (appeared or in press in top journals), **4 books & 28 proceedings papers**  
**4163 citations & h-index: 32** (Source: *Google Scholar* 06/04/22)

## Top 10 Most Influential Publications

[Citations]

- S DOLGOV, K ANAYA-IZQUIERDO, C FOX, R SCHEICHL. Approximation and sampling of multivariate probability distributions in the TT decomposition, *Stat Comput* **30**, 2020 [30]
- G DETOMMASO, T CUI, A SPANTINI, Y MARZOUK, R SCHEICHL. A Stein variational Newton method, *Adv Neur Inform Proc Sys* **31**, 2018 (NeurIPS '18) [74]
- IG GRAHAM, FY KUO, D NUYENS, R SCHEICHL, IH SLOAN. Analysis of circulant embedding methods for sampling stationary random fields, *SIAM J Numer Anal* **56**, 2018 [45]
- T DODWELL, C KETELSEN, R SCHEICHL, A TECKENTRUP. A hierarchical multilevel Markov chain Monte Carlo algorithm with applications to UQ in subsurface flow, *SIAM/ASA J Uncertain Quantif* **3**, 2015 (SIGEST Prize: reprinted in *SIAM Review* **61**, 2019) [156]
- IG GRAHAM, FY KUO, JA NICHOLLS, R SCHEICHL, CH SCHWAB, IH SLOAN. Quasi-MC FE methods for elliptic PDEs with log-normal random coefficients, *Numer Math* **131**, 2015 [143]
- N SPILLANE, V DOLEAN, P HAURET, F NATAF, C PECHSTEIN, R SCHEICHL. Abstract robust coarse spaces for systems of PDEs via generalized eigenprob., *Numer Math* **126**, 2014 [203]
- J CHARRIER, R SCHEICHL, A TECKENTRUP. FE error analysis of elliptic PDEs with random coefficients and its application to MLMC methods, *SIAM J Numer Anal* **51**, 2013 [230]
- KA CLIFFE, M GILES, R SCHEICHL, A TECKENTRUP. Multilevel Monte Carlo methods and applications to elliptic PDEs with random coefficients, *Comput Visual Sci* **14**, 2011. [542]
- C PECHSTEIN, R SCHEICHL. Analysis of FETI f. multiscale PDEs, *Numer Math* **111**, 2008 [106]
- IG GRAHAM, P LECHNER, R SCHEICHL. Domain decomposition for multiscale PDEs, *Numer Math* **106**, 2007 [197]

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## KEYNOTE LECTURES (SELECTION)

- 90th GAMM Annual Meeting (*Gesellschaft für Angewandte Mathem. & Mechanik*) Vienna, 2019
- 12th European Conference on Numerical Mathematics (*ENUMATH*) Bergen, 2017
- 26th Biennial Conference on Numerical Analysis Glasgow, 2015
- 20th Int. Conference on Computational Methods for Water Resources Stuttgart, 2014
- 20th Int. Conference on Domain Decomposition Methods (*DD20*) San Diego, 2011
- 15th Computational Techniques and Applications Conference (*CTAC2010*) Sydney, 2010

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## MAJOR GRANTS AS PI (SELECTION): [Total Income: ~ €30M / ~ €4M AS PI]

- DFG Cluster of Excellence *STRUCTURES Exploratory Project* with Berges (Inst. Theo. Phys.), Jansen (DESY Zeuthen), Müller (Bath) (**PI**, 2021-23) [€117K]
- EPSRC Maths for Manufacturing Grant EP/K031368/1 with GKN Aerospace (**joint PI** with Butler, Mech. Eng., 2014-17) [£499K]
- NERC Programme Grants NE/J005576/1 & NE/K006754/1 with Met Office, STFC, Exeter, Reading, Imperial, Leeds, Manchester (**Bath PI**, 2011-16) [Bath share: £455K]
- EPSRC Collaborative Grant EP/H051503/1 (under the Energy Mission Programme) with Nottingham, Oxford, NDA, Serco TAS (**Lead-PI**, 2011-14) [£677K]

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## RESEARCH SUPERVISION

**PhDs (graduated):** R Norton (2008), S Buckeridge (2010), E Dodgson (2011), A Teckentrup (2013), G Katsiolides (2018), M Parkinson (2018), G Detommaso (2020), L Seelinger (2021)

**Postdocs:** J Van lent (2006-08), A Ferreiro (2012-13), E Ullmann (2011-14), E Müller (2011-15), T Kim (2014-15), A Reinarz (2016-17), S Dolgov (2016-18), A Gilbert (2018-20), C Ma (2019-22)

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Heidelberg, 6th April 2022.